Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Previously presented) A waveguide system for propagating light signals comprising:

a substrate;

a first waveguide adapted to propagate a first light signal, the first waveguide having a first waveguide portion, the first waveguide portion running in a first direction on a first plane relative to the substrate;

a second waveguide adapted to propagate a second light signal, the second waveguide having a second waveguide portion, the second waveguide portion running in a second direction on the first plane, the second direction being different than the first direction; and

a third waveguide having a third waveguide portion, the third waveguide portion lying in a second plane, the second plane being different than the first plane, the third waveguide portion being directionally coupled with the second waveguide portion to propagate the second light signal from the second waveguide portion into the third waveguide portion.

2. (Previously presented) The waveguide system of claim 1, wherein the second plane is parallel to the first plane.

3. (Previously presented) The waveguide system of claim 2, wherein the first plane is parallel to the substrate and lies between the substrate and the second plane.

4. (Previously presented) The waveguide system of claim 1, wherein the first direction is substantially perpendicular to the second direction.

5. (Previously presented) The waveguide system of claim 2, wherein the first direction is substantially perpendicular to the second direction.

6. (Previously presented) The waveguide system of claim 1, wherein the third waveguide portion is directionally coupled to the second waveguide portion over a coupling length that achieves full or substantially near full coupling of the second light signal from the second waveguide portion to the third waveguide portion.

7. (Previously presented) The waveguide system of claim 6, wherein the coupling length achieves full coupling of the second light signal from the second waveguide portion to the third waveguide portion.

8. (Previously presented) The waveguide system of claim 1, wherein the third waveguide portion is directionally coupled to the second waveguide portion over a coupling length that achieves at least 90% of full coupling of the second light signal from the second waveguide portion to the third waveguide portion.

9. (Previously presented) The waveguide system of claim 1, wherein the third waveguide portion is directionally coupled to the second waveguide portion over a coupling length that achieves at least 75% of full coupling of the second light signal from the second waveguide portion to the third waveguide portion.

10. (Previously presented) The waveguide system of claim 6, wherein the coupling length depends on the characteristics of the second waveguide portion, the characteristics of the third waveguide portion, the separation between the second waveguide portion and the third

waveguide portion, and the wavelength of the second light signal.

11. (Previously presented) The waveguide system of claim 6, wherein the second plane is parallel to the first plane.

12. (Previously presented) The waveguide system of claim 11, wherein the first plane is parallel to the substrate and lies between the substrate and the second plane.

13. (Previously presented) The waveguide system of claim 6, wherein the first direction is substantially perpendicular to the second direction.

14. (Previously presented) The waveguide system of claim 11, wherein the first direction is substantially perpendicular to the second direction.

15. (Previously presented) The waveguide system of claim 12, wherein the third waveguide portion is directionally coupled to the second waveguide portion over a coupling length that achieves full or substantially near full coupling of the second light signal from the second waveguide portion to the third waveguide portion.

16. (Previously presented) The waveguide system of claim 15, wherein the coupling length achieves full coupling of the second light signal from the second waveguide portion to the third waveguide portion.

17. (Previously presented) The waveguide system of claim 12, wherein the third waveguide portion is directionally coupled to the second waveguide portion over a coupling length that achieves at least 90% of full coupling of the second light signal from the second waveguide portion to the third waveguide portion.

18. (Previously presented) The waveguide system of claim 12, wherein the third waveguide portion is directionally coupled to the second waveguide portion over a coupling length that achieves at least 75% of full coupling of the second light signal from the second waveguide portion to the third waveguide portion.

19. (Previously presented) The waveguide system of claim 15, wherein the coupling length depends on the characteristics of the second waveguide portion, the characteristics of the third waveguide portion, the separation between the second waveguide portion and the third waveguide portion, and the wavelength of the second light signal.

20. (Previously presented) The waveguide system of claim 1, wherein the substrate is a semiconductor substrate.

21. (Previously presented) The waveguide system of claim 12, wherein the substrate is a semiconductor substrate.

22. (Previously presented) The waveguide system of claim 1, further comprising:

a fourth waveguide having a fourth waveguide portion, the fourth waveguide portion running in a fourth direction on the first plane, the fourth direction being different than the first direction; and

the third waveguide having a fifth waveguide portion, the fifth waveguide portion lying in the second plane, the fifth waveguide portion being directionally coupled with the fourth waveguide portion to propagate the second light signal from the fifth waveguide portion into the fourth waveguide portion.

23. (Previously presented) The waveguide system of claim 22, wherein the second plane is parallel to the first plane.

24. (Previously presented) The waveguide system of claim 23, wherein the first plane is parallel to the substrate and lies between the substrate and the second plane.

25. (Previously presented) The waveguide system of claim 22, wherein the fourth direction is substantially parallel to the second direction.

26. (Previously presented) The waveguide system of claim 25, wherein the fourth direction is substantially perpendicular to the first direction.

27. (Previously presented) The waveguide system of claim 22, wherein the fourth and fifth waveguide portions are directionally coupled over a coupling length that achieves full or substantially near full coupling of the second light signal from the fifth waveguide portion to the fourth waveguide portion.

28. (Previously presented) The waveguide system of claim 27, wherein the coupling length achieves full coupling of the second light signal from the fifth waveguide portion to the fourth

waveguide portion.

29. (Previously presented) The waveguide system of claim 22, wherein the fourth and fifth waveguide portions are directionally coupled over a coupling length that achieves at least 90% of full coupling of the second light signal from the second waveguide portion to the third waveguide portion.

30. (Previously presented) The waveguide system of claim 22, wherein the fourth and fifth waveguide portions are directionally coupled over a coupling length that achieves at least 75% of full coupling of the second light signal from the second waveguide portion to the third waveguide portion.

31. (Previously presented) The waveguide system of claim 22, wherein the substrate is a semiconductor substrate.

32-51. (Cancelled)